Do Preferential Trade Policies (Actually) Increase Exports? A comparison between EU and US trade policies

Maria Cipollina (University of Molise)

David Laborde (International Food Policy Research Institute)

Luca Salvatici (University of Molise)

AgFoodTrade

New Issues in Agricultural, Food & Bioenergy Trade

Prin 2007

PUE PIEC

Politiche dell'Unione Europea, Processi di Integrazione Economica e Commerciale ed esiti del negoziato Wto

Object : *trade preferences (1)*

- This paper analyses the impact of preferences in terms of trade flows, including traditional non-reciprocal agreements as well as preferential access also granted to developing countries under bilateral reciprocal arrangements.
- We use a gravity equation approach in order to single out the contribution of the preferential policy to the deviation from the "normal" trade levels

why preferential policies?

Because over the time a large number of preferential trade arrangements has been concluded between developed countries, such as EU and US, and developing countries in order to integrate them in world trade and to promote their economic growth

Object : *trade preferences (2)*

We focus on preferential schemes granted in the year 2004.

US preferential programs in 2004	EU Preferential programs in 2004
Generalized System of Preferences (GSP)	*Generalized System of Preferences (GSP), including Everything But Arms (EBA), GSP-Drugs, GSP-Labor Rights schemes*
African Growth Opportunity Act (AGOA)	Cotonou Agreement
Andean Trade Promotion and Drug Eradication Act (ATPDEA)	EU-Chile Association Agreement
Caribbean Basin Initiative (CBI)	EU-Mexico Free Trade Agreement
Caribbean Basin Trade Partnership Act (CBTPA)	Euro-Mediterranean partnership
Chile Freet Trade Agreement	European Economic Area (EEA) Agreement
Israel Free Trade Agreement	EU-Turkey Custom Union
Jordan Free Trade Agreement	Trade, Development and Co-operation Agreement (TDCA) [South Africa]
North America Free Trade Association (NAFTA)	
Singapore Free Trade Agreement	

Methodology: *Gravity approach (1)*

The model is based on a standard CES monopolistic competition as in Lai and Trefler (2002) and Lai and Zhu (2004). A nested CES structure aims to reproduce the Armington assumption:

$$IM_{ij}^{k} = \alpha_{ij}^{k} M_{i}^{k} \left(\frac{PM_{j}^{k}}{PIM_{ij}^{k}} \right)^{\rho}$$

Where IM_{ij}^{k} is the nominal demand for commodity k of importer j by exporter i; α_{ij}^{k} is the consumer preference parameter; PM_{i}^{k} and PIM_{ij}^{k} are multilateral price indexes; $\rho = (\sigma - 1)$ and $\sigma > 1$ is the elasticity of substitution among all varieties from different exporters.

Methodology: Gravity approach (2)

Prices differ between locations due to trade costs so that:

$$PIM_{ij}^{k} = p_i^{k}(1 + c_{ij}^{k})(1 + \tau_{ij}^{k})$$

where c_{ij}^{k} is a bilateral ad valorem trade costs, τ_{ij}^{k} the bilateral *ad valorem* tariffs and p_i^{k} the export price.

By substituting and taking the logs we get:

$$\ln IM_{ij}^{k} = a_{ij}^{k} + \ln M_i^{k} + \varrho \ln p_i^{k} - \varrho \ln(1 + c_{ij}^{k}) - \varrho \ln(1 + \tau_{ij}^{k}) + \varrho \ln PM_j^{k} + \varepsilon$$

This expression is very similar to a gravity equation à la Anderson and van Wincoop (2004).

Methodology: Gravity approach (3)

$$\ln IM_{ij}^k = \underbrace{a_{ij}^k}_{T1} + \underbrace{\ln M_i^k}_{T2} - \underbrace{\varrho \ln p_i^k}_{T3} - \underbrace{\varrho \ln(1+c_{ij}^k)}_{T4} - \underbrace{\varrho \ln(1+\tau_{ij}^k)}_{T5} + \underbrace{\varrho \ln PM_j^k}_{T6} + \varepsilon$$

- $T1$ is a consumer preference parameter;
- $T2$ is the market size;
- $T3$ denotes the exporter's supply price for commodity k;
- $T4$ trade cost component;
- $T5$ is the power of applied tariff;
- $T6$ is the overall price of imports and it is common for all exporters:

$$PM_j^k = \left[\sum_i (\alpha_{ij}^k PIM_{ij}^k)^{1-\rho} \right]^{1/1-\rho}$$

PM_j^k plays a crucial role in explaining the total level of imports, but it is not directly estimated due to the unknown elasticity of substitution parameter.

Methodology: *Gravity approach (4)*

Accordingly, we assume that the bulk of exporters face the same tariff and have the same *CIF* price at the border of the importing country:

$$PM_j^k = \left[\sum_i (\alpha_{ij}^k PCIF_{i,j}^k (1 + \tau_{i,j}^k))^{1-\rho} \right]^{1/1-\rho} = PCIF_j^k (1 + \tau_j^k) \left(\underbrace{\sum_i \alpha_{ij}^k}_{\equiv 1} \right)^{1/1-\rho}$$

As a consequence, *T6* can be written as:

$$\ln PCIF_j^k + \ln(1 + \tau_j^k)$$

Methodology: Gravity approach (5)

Subtracting $\ln M_i^k$, we get as dependent variable the share of import of product k from exporter i to importer j.

$$\ln\left(\frac{IM_{ij}^k}{M_i^k}\right) = \alpha_{ij}^k - \rho\ln(1+c_{ij}^k) + \underbrace{\rho[\ln(1+\tau_j^k) - \ln(1+\tau_{ij}^k)]}_{T7} + \rho\ln(1+c_{ij}^k) - \rho\ln p_i^k + \varepsilon$$

Trade preferences reduce border costs as a consequence of the tariff reduction. In the case of preferential imports, higher preferences decrease the negative trade impact of the regular tariffs.

$T7$ is the preferential margin defined in relative terms.

Methodology: Preference margin

The preferential margin is the ratio of the power of the benchmark tariff $(1 + \tau_j^k)$ of product k, and the power of bilateral tariff $(1 + \tau_{ij}^k)$ incurred by a specific exporter i:

$$(1 + pref_{ij}^k) = \frac{(1 + \tau_j^k)}{(1 + \tau_{ij}^k)}$$

Apparently, the margin intensity is conditional on the choice of the benchmark tariff. The conventional approach would be to consider it equal to the bound MFN rate, this leads to an obvious overestimation of the competitive advantages enjoyed by exporting countries if the applied MFN tariff is lower than the bound one.
As a consequence, we compute the preferential margins using the applied MFN duty.
Most DCs and products may be eligible for several preferential regimes. Since data do not allow to distinguish the specific scheme under which import take place, we assume that the lowest available duty is the one actually used.

Methodology: *Econometric approach (1)*

Working at a highly disaggregated level implies the presence of many zero trade flows that create obvious problems in the log-linear form of the gravitational equation.

We distinguish between two different kinds of zero-valued trade flows:

1) products that are never traded;

2) products that are not traded, but could be (potentially, at least) traded.
Since preferential policies cannot possibly influence the first group, in our analysis we only keep exporters that have at least one export flow at the world level at the HS6 level for the product concerned during the period 2001-2004.

In the same vein, we exclude products that are not imported at all in the EU and the US.

Methodology: *Econometric approach (2)*

Zero flows do not reflect unobservable trade values but they are the result of economic decision making based on the potential profitability of engaging in bilateral trade at all.

Several authors consider the **Heckman two-step estimator** as the best procedure (Linders and de Groot, 2006; Helpman, Melitz and Rubistein, 2008; Martin and Pham, 2008), others argue that gravity type models should be estimated in multiplicative form, and recommend maximum likelihood estimation techniques based on the **Poisson specification** of the model (Siliverstovs and Schumacher, 2007; Santos-Silva and Tenreyro, 2003, 2006).

The advantage of implementing the Heckman two step procedure is that such an approach does not only allow to take into account the lack of trade, but it also allows to distinguish the impact of preferences on the extensive as well as on the intensive margin.

Methodology: *Econometric approach (3)*

An increased probability of registering positive trade flows in the first stage, as a matter of fact, implies that a larger set of products is traded (**extensive margin**), while a positive coefficient associated with the preference margin in the second stage is related to larger trade flows (**intensive margin**).

However, because of the presence of heteroskedasticity, estimates of the log-linear form of the gravity equation are biased and inconsistent, and this may lead to prefer the Poisson specification of the trade gravity model.

On the other hand, the standard Poisson model is vulnerable for problems of overdispersion and excess number of zero flows.

To overcome the heteroskedasticity (in the case of the log-normality assumption) and overdispersion (in the case of the standard Poisson specification) problems, in this paper we make use of the **Zero-Inflated Poisson (ZIP)** model as in Burger et al. (2009).

Methodology: *Econometric approach (4)*

In practice, in the first stage we estimate the following probit model:

$$\rho_{ijk} = \Pr \left(m_{ijk} = 0 \,\middle|\, c_{ij}^k, \tau_0^k, \tau_{ij}^k, PCIF_j^k, p_i^k \right)$$

In the second stage, we estimate the following specification:

$$m_{ijk} = \frac{IM_{ij}^k}{M_i^k} = \alpha_{ij}^k - \rho \ln(1 + c_{ij}^k) + \rho [\ln(1 + pref_{ij}^k)] * PRE + \rho [\ln(1 + pref_{ij}^k)] * PRE * EU + \rho \ln PCIF_j^k - \rho \ln p_i^k + \varepsilon$$

The preference factor variable (1+*pref*$_{ijk}$) is associated with the dummy *PRE* which is equal to 1 in the case of preferential trade flows and the dummy *EU* which is equal to 1 if the importer is the EU.

In the estimation variables as $(1 + c_{ij}^k)$ and $PCIF_j^k$ are proxied by fixed effects defined for importer, exporter and product, whereas the variable p_i^k is proxied by the unit value by exporter.

Methodology: Econometric approach (5)

Finally, we compute the percentage change due to the hypothetical elimination of existing preferences as follows (Lai and Zhu, 2004):

$$Preference\ effect = \sum_{ijk}(E[m_{ijk} \mid pref_{ijk} > 0] - E[m_{ijk} \mid pref_{ijk} = 0]) / \sum_{ijk} E[m_{ijk} \mid pref_{ijk} > 0]$$

In calculating these results, we estimate the counterfactual change in the dependent variable, total EU imports, which would follow from the removal of the preferential advantage.

Data

All data – i.e., tariffs and trade – refer to 2004.

EU trade flows are from the Eurostat database Comext

US trade flows are from the United States International Trade Commission

We consider 234 exporters of 10,174 products at the 8-digit level of EU Combined Nomenclature classification to the EU (25 countries) and 11,867 products for the US case.

We run separate regressions for several commodity groups defined according to the Harmonised System (HS) sections

The *ad valorem equivalent* are computed using the TARIC and the US Harmonized Tariff Schedule. We apply a similar methodology to the one applied to build the MAcMapHS6 version 2 database (Boumelassa, Laborde and Mitaritonna, 2009).

It should be noted that our dataset does not include binding TRQs, since they raise a limited dependent variable estimation problem.

Descriptive analysis: Share of imports by type of tariff regime (period 2004)- **EU25 (intra EU trade excluded)**

Sections	% of MFN duty-free	% of MFN duty (no pref.)	% of Pref. duty	Tot.trade (Ml of €)	Pref. trade (Ml of €)
Overall	57	29	14	841,392	100.0
Animal prod	12	45	43	12,600	1.5
Vegetables	49	28	23	20,600	2.4
Oil & Fats	12	62	25	2,680	0.3
Foodstuffs,beverages,spirits,tobacco	38	36	26	21,800	2.6
Mineral prod.	98	1	1	157,000	18.7
Chemicals	53	37	10	71,000	8.4
Plastics	12	62	26	23,400	2.8
Raw hides, skins, leather	17	70	13	9,000	1.1
Wood	73	14	13	10,600	1.3
Paper articles	100	0	0	12,500	1.5
Textiles	3	54	43	62,700	7.5
Other textile articles	0	63	37	11,500	1.4
Stones, plaster, cement, etc.	14	53	33	6,650	0.8
Pearls, precious stones, metals	87	8	5	27,700	3.3
Base metals	50	29	21	55,000	6.5
Machineries	60	29	10	220,000	26.1
Transport equipment	31	53	16	52,300	6.2
Various instruments	59	30	11	37,100	4.4
Arms	16	68	16	232	0.0
Miscellaneous manufactures	41	47	12	24,700	2.9
Works of art	100	0	0	2,330	0.3

A share of around 60% of total EU imports enter duty-free under MFN arrangements, the residual 40% is divided in one third as preferential imports and the remaining as imports paying positive MFN duties. At the section level, EU imports products of **paper and paperboard** and **works of art** under an MFN duty-free regime. The EU imports a large percentage of **mineral products**, **wood and articles of wood** and **natural and precious metals** with a duty-free MFN access, and more than half of products of the remaining sections without any preferences.

Descriptive analysis: Share of imports by type of tariff regime (period 2004)- *US*

Sections	% of MFN duty-free	% of MFN duty (no pref.)	% of Pref. duty	Tot.trade (Ml of €)	Pref. trade (Ml of €)
Overall	50	30	20	1,394,480	100.0
Animal prod	80	5	15	14,800	1.1
Vegetables	47	13	40	18,000	1.3
Oil & Fats	29	43	27	2,290	0.2
Foodstuffs,beverages,spirits,tobacco	50	31	19	25,100	1.8
Mineral prod.	32	32	36	172,000	12.3
Chemicals	79	14	6	104,000	7.5
Plastics	14	48	38	42,200	3.0
Raw hides, skins, leather	5	86	9	10,100	0.7
Wood	70	13	16	25,000	1.8
Paper articles	100	0	0	25,200	1.8
Textiles	4	71	25	87,100	6.2
Other textile articles	7	90	2	20,800	1.5
Stones, plaster, cement, etc.	27	51	22	16,300	1.2
Pearls, precious stones, metals	74	12	14	33,400	2.4
Base metals	60	23	17	80,300	5.8
Machineries	70	19	11	388,000	27.8
Transport equipment	13	47	40	212,000	15.2
Various instruments	65	27	8	47,200	3.4
Arms	57	36	7	1,370	0.1
Miscellaneous manufactures	78	18	5	64,000	4.6
Works of art	100	0	0	5,320	0.4

Half of products enter under an MFN duty-free regime, around 20% benefit from positive preference margins and around 30% are MFN duty- imports.

At the section level, also US imports products of **paper and paperboard** and **works of art** under an MFN duty-free regime, while for the other sections the structure of trade differs considerably.

The US imports a large percentage of **live animals and animal products**, **chemicals**, **natural and precious metals**, **base metals**, **machineries**, **cinematographic and musical instruments**, **arms and ammunition** and **other manufactured articles** under a MFN duty-free regime, and most imports other sections take place under a preferential arrangement.

Descriptive analysis: *Value and preference margins for commodity groups with preferential trade flows*

Sections	Bilateral applied tariff [a], % (Standard Deviation)				MFN tariff [a], %		Preference factor [a], %	
	EU		US		EU	US	EU	US
Overall	1.4	(0.08)	0.6	(0.01)	7.7	6.2	**1.06**	**1.06**
Animal prod	1.4	(0.03)	0.0	(0.00)	13.5	3.9	1.12	1.04
Vegetables	**2.4**	(0.05)	0.1	(0.01)	10.1	4.8	1.08	1.05
Oil & Fats	**2.3**	(0.05)	0.0	(0.00)	10.5	3.6	1.08	1.04
Foodstuffs,beverages,spirits,tobacco	**7.1**	(0.27)	0.1	(0.01)	25.4	6.0	1.18	1.06
Mineral prod.	0.0	(0.01)	0.0	(0.00)	4.7	4.8	1.02	1.03
Chemicals	0.3	(0.00)	0.0	(0.00)	2.2	2.7	1.05	1.05
Plastics	0.3	(0.02)	0.1	(0.00)	5.6	4.6	1.05	1.04
Raw hides, skins, leather	0.3	(0.01)	**0.4**	(0.00)	5.7	4.5	1.04	1.06
Wood	0.4	(0.01)	0.0	(0.02)	4.6	6.0	1.04	1.05
Textiles	2.3	(0.04)	0.0	(0.00)	9.5	13.0	1.07	1.13
Other textile articles	1.1	(0.03)	**0.3**	(0.02)	7.6	11.3	1.06	1.11
Stones, plaster, cement, etc.	0.7	(0.02)	0.1	(0.01)	4.9	6.4	1.04	1.06
Pearls, precious stones, metals	0.0	(0.00)	0.1	(0.01)	3.2	6.3	1.03	1.06
Base metals	0.2	(0.00)	0.0	(0.00)	2.8	4.3	1.04	1.04
Machineries	0.1	(0.01)	0.0	(0.00)	3.8	4.0	1.03	1.03
Transport equipment	0.5	(0.01)	0.0	(0.00)	2.8	3.2	1.04	1.03
Various instruments	0.2	(0.02)	0.0	(0.00)	5.1	3.4	1.03	1.03
Arms	0.0	(0.01)	0.0	(0.00)	3.3	3.3	1.03	1.04
Miscellaneous manufactures	0.1	(0.00)	0.1	(0.01)	3.5	5.7	1.03	1.06

Looking at the relative preferential factors, the (simple) average is the same (1.06) both for the EU and the US even if the tariff structure of the two countries is quite different.

The **average protection**, as matter of fact, is significantly **higher in the EU than in the US**.

The most protected EU sectors are the **agricultural** ones, while this is not the case for the US where the most protected sectors are **raw hides and footwear**. Not surprisingly, these are also the sectors featuring the largest preference margins.

[a] *Sample of positive preferential trade flows (simple average).*

Econometric results: *Results for commodity groups – extensive margin*

Probit regression, marginal effects	ln(preference margin)	ln(preference margin)* dummy EU	ln(unit value)	ln(unit value)* dummy EU	N. of obs. *Pseudo R²*	Coefficient for EU preference marginal effect
Animal prod	0.15** (0.07)	0.00 (0.07)	-0.06** (0.02)	-0.05** (0.02)	94,168 *0.30*	0.00
Vegetables	0.19*** (0.02)	-0.12*** (0.02)	0.00 (0.01)	-0.03*** (0.01)	85,748 *0.27*	0.07
Oil & Fats	0.28*** (0.10)	-0.25** (0.10)	0.04 (0.06)	-0.08 (0.06)	13,585 *0.23*	0.03
Foodstuffs,beverages,spirits,tobacco	0.17*** (0.02)	-0.12*** (0.02)	0.06*** (0.02)	-0.11*** (0.02)	146,093 *0.30*	0.05
Mineral prod.	-0.24*** (0.09)	0.11 (0.10)	-0.01 (0.01)	-0.07*** (0.02)	22,334 *0.30*	-0.24
Chemicals	0.15*** (0.02)	-0.14*** (0.02)	-0.03*** (0.01)	0.01 (0.01)	182,624 *0.41*	0.01
Plastics	0.19*** (0.02)	0.04* (0.02)	-0.01 (0.02)	-0.02 (0.02)	79,583 *0.47*	0.23
Raw hides, skins, leather	0.05 (0.06)	-0.34*** (0.06)	0.10*** (0.02)	0.12*** (0.02)	26,048 *0.34*	-0.34
Wood	0.09** (0.05)	-0.37*** (0.05)	-0.01 (0.02)	-0.05*** (0.02)	31,802 *0.34*	-0.28
Textiles	0.15*** (0.01)	-0.11*** (0.01)	-0.01 (0.01)	0.04*** (0.01)	239,324 *0.40*	0.04
Other textile articles	0.16*** (0.04)	-0.27*** (0.04)	0.03 (0.03)	-0.01 (0.03)	24,067 *0.45*	-0.11
Stones, plaster, cement, etc.	0.19*** (0.03)	-0.16*** (0.03)	0.05*** (0.02)	-0.08*** (0.02)	48,535 *0.43*	0.03
Pearls, precious stones, metals	0.00 (0.09)	0.03 (0.11)	0.02 (0.02)	-0.01 (0.02)	5,286 *0.40*	0.00
Base metals	0.07*** (0.02)	-0.09*** (0.02)	-0.04*** (0.01)	0.01 (0.01)	159,507 *0.43*	-0.02
Machineries	0.07*** (0.02)	0.08*** (0.02)	0.01 (0.01)	-0.01 (0.00)	346,440 *0.44*	0.15
Transport equipment	0.11** (0.05)	-0.08 (0.05)	0.06*** (0.02)	-0.08*** (0.02)	58,790 *0.41*	0.11
Various instruments	0.05 (0.04)	0.11*** (0.04)	0.02 (0.01)	-0.02 (0.01)	60,453 *0.40*	0.11
Miscellaneous manufactures	0.05 (0.04)	-0.03 (0.04)	0.03 (0.02)	-0.02 (0.02)	46,032 *0.44*	0.00

Econometric results: Results for commodity groups – intensive margin

Section	ln(preference margin)* dummy pref trade	ln(preference margin)* dummy pref trade* dummy EU	ln(unit value)	ln(unit value)* dummy EU	N. of non zero obs.	Elasticity of substitution, σ_{US}	Elasticity of substitution, σ_{EU}
Animal prod	0.08*** (0.03)	0.15*** (0.03)	-0.13*** (0.01)	-0.16*** (0.01)	6,641	1.08	1.23
Vegetables	0.25*** (0.01)	0.03*** (0.01)	0.04*** (0.01)	-0.09*** (0.01)	12,488	1.25	1.28
Oil & Fats	0.62*** (0.04)	-0.22*** (0.04)	-0.23*** (0.04)	0.07** (0.04)	1,411	1.62	1.40
Foodstuffs,beverages,spirits,tobacco	0.16*** (0.01)	0.13*** (0.01)	0.03*** (0.01)	0.06*** (0.01)	15,648	1.16	1.29
Mineral prod.	-0.03 (0.04)	0.34*** (0.05)	-0.17*** (0.01)	0.01 (0.01)	3,976	0.00	1.34
Chemicals	0.39*** (0.01)	-0.05*** (0.01)	0.06*** (0.00)	0.04*** (0.00)	24,958	1.39	1.34
Plastics	0.53*** (0.01)	0.08*** (0.02)	-0.14*** (0.01)	0.13*** (0.01)	14,603	1.53	1.61
Raw hides, skins, leather	0.06* (0.04)	-0.19*** (0.04)	-0.12*** (0.02)	0.15*** (0.02)	6,253	1.06	0.87
Wood	-0.04 (0.03)	0.60*** (0.03)	-0.07*** (0.02)	0.02 (0.02)	6,189	0.00	1.60
Textiles	0.56*** (0.01)	-0.28*** (0.01)	0.07*** (0.01)	0.04*** (0.01)	56,866	1.56	1.28
Other textile articles	0.28*** (0.04)	0.03 (0.04)	0.12*** (0.02)	0.23*** (0.02)	6,688	1.28	0.00
Stones, plaster, cement, etc.	0.29*** (0.02)	0.21*** (0.02)	-0.10*** (0.01)	-0.05*** (0.01)	10,526	1.29	1.50
Pearls, precious stones, metals	0.03 (0.06)	0.08 (0.07)	-0.03** (0.01)	0.05*** (0.01)	2,345	0.00	0.00
Base metals	0.20*** (0.01)	0.01 (0.01)	-0.05*** (0.00)	0.00 (0.00)	30,801	1.20	0.00
Machineries	0.03** (0.01)	0.40*** (0.01)	0.08*** (0.00)	-0.01 (0.00)	64,900	1.03	1.43
Transport equipment	0.40*** (0.02)	0.03 (0.02)	0.02** (0.01)	0.09*** (0.01)	8,559	1.40	0.00
Various instruments	-0.30*** (0.03)	0.83*** (0.04)	-0.02** (0.01)	-0.01 (0.01)	15,730	0.7	1.53
Miscellaneous manufactures	0.64*** (0.03)	-0.29*** (0.03)	0.26*** (0.02)	-0.13*** (0.02)	12,544	1.64	1.35

Econometric results: The estimated preference effect – Results for commodity groups

Sectors	Preference effect (%)		Trade volume		% of Preferential trade	
	US	EU25	US	EU25	US	EU25
Animal prod	0.7	2.5	104	315	5	6
Vegetables	0.3	1.5	54	309	1	7
Oil & Fats	3.5	0.3	80	8	13	1
Foodstuffs,beverages,spirits,tobacco	0.02	0.4	5	87	0	2
Mineral prod.	0	0.1	0	157	0	10
Chemicals	0.3	1.5	312	1,065	5	15
Plastics	0.2	1.9	84	445	1	7
Raw hides, skins, leather	0.01	0.9	1	81	0	7
Wood	0	0.1	0	11	0	1
Textiles	22.0	0.2	19,162	125	88	0
Other textile articles	0.1	0.01	21	1	5	0
Stones, plaster, cement, etc.	0.1	0.5	16	33	0	2
Base metals	0.01	0	8	0	0	0
Machineries	0.01	0.4	39	880	0	4
Transport equipment	3.1	0	6,572	0	8	0
Various instruments	0.2	0.3	94	111	3	3
Miscellaneous manufactures	0.1	0.1	64	25	2	1

We compute the percentage change in total imports due to the hypothetical elimination of existing preferences, presenting the results only for sectors with a statistically significant estimated preference impact.

In the **US** case, as it could have been expected the Section with the largest preference margin (**textiles**) has the largest impact on trade flows both in relative and absolute terms. Indeed, if preferences were removed almost 90% of present trade flows would not take place. The only other section with a significant impact is **Oil & Fats**, while in all the other cases the trade flows involved are hardly significant and the value of the preferences seem to be mostly due to the rent earned on exports that would take place even without the preferences.

As far as the EU is concerned, the most relevant sections are **animals** and **chemicals.** Also in this case, the volumes of trade involved are rather trivial as a share of total flows, and they are likely to take place even without the preferential schemes.

Conclusions

Our results confirm that preferential schemes have a significant and positive impact on the intensive margin of trade, while the impact on the extensive margin is very differentiated across sectors both in terms of sign and magnitude of the estimated coefficients. A positive impact on the extensive margin means that preferences help to reach product diversification, while a negative sign would confirm the traditional criticism that preferences lead to excessive export specialization.

The comparison between US and EU preferences shows that US schemes are most effective on the extensive margins, whereas the EU ones are most effective on the intensive margins.

However, the (hypothetical) removal of actual policies would not affect the vast majority of current preferential flows. As a consequence, the value of the preferences seem to be mostly due to the rent earned on exports that would take place even without the preferences.

Future work

An obvious limit of this analysis is the estimation of multilateral price terms: the assumption that exporters face an unique price and tariff is apparently unrealistic

We may think of using exporter-products fixed effect, but this is not possible in our cross-section

We plan to use the value of the elasticity of substitution estimate in order to compute the price index that is necessary for the assessment of the preference margins: indeed, the intensity of the preference does only depend on the highest paid rate, but also on the share of exporters paying such a rate.

THANK YOU FOR YOUR ATTENTION

Maria Cipollina

Email: cipollina@unimol.it

David Laborde

Email: D.Laborde@cgiar.org

Luca Salvatici

Email: luca.salvatici@unimol.it